

## CLAIMS

Sub  
ar

1. A stent, in particular a coronary stent, comprising at least two tubular portions (8; 8'; 8"; 8'''; 8''''') which are arranged adjacently in the longitudinal direction of the stent (1; 1'; 1"; 1'''; 1''''') and which comprise a plurality of interconnected, substantially cell-shaped elements (10; 10'; 10"; 10'''; 10''''') which have an orientation and are connected together in the longitudinal direction of the stent (1; 1'; 1"; 1'''; 1''''') by way of at least one first connecting means (20; 20'; 20"; 20'''; 20'''''), wherein the elements (10; 10'; 10"; 10'''; 10''''') are of such an arrangement and/or configuration that the ends of the elements (10; 10'; 10"; 10'''; 10''''') which are in the longitudinal direction of the stent (1; 1'; 1"; 1'''; 1''''') define an edge contour (36, 37, 38; 36", 37", 38"; 36''', 37''', 38''') extending around the stent (1; 1'; 1"; 1'''; 1''''') in a wave-like configuration in the peripheral direction thereof, characterised in that the mutually adjoining edge contours (36, 37; 36", 37"; 36''', 37''') of two tubular portions (8; 8'; 8"; 8'''; 8''''') extend around the stent substantially in in-phase relationship.

2. A stent as set forth in claim 1 characterised in that the edge contours (36, 37; 36", 37"; 36''', 37''') of the two tubular portions (8; 8'; 8" 8'''; 8''''') engage into each other in the manner of a tooth configuration.

3. A stent as set forth in claim 1 or claim 2 characterised in that the two edge contours (37, 38; 37", 38"; 37''', 38''') of a tubular portion (8; 8'; 8" 8'''; 8''''') extend substantially in in-phase relationship with each other or displaced substantially through half a period relative to each other.

4. A stent as set forth in one of the preceding claims characterised in that the first connecting means (20; 20'; 20"; 20'''; 20''''') connects elements (10; 10'; 10"; 10'''; 10''''') of the same orientation together.

2  
09804975-070501  
T05020"54640860

5. A stent as set forth in one of the preceding claims characterised in that the first connecting means (20; 20'; 20"; 20'''; 20''''') is of a bar-like configuration.

6. A stent as set forth in one of the preceding claims characterised in that the first connecting means (20; 20'; 20"; 20'''; 20''''') extends substantially parallel to the longitudinal axis of the stent (1; 1'; 1"; 1'''; 1''''').

7. A stent as set forth in one of the preceding claims characterised in that there are provided at most two and preferably one first connecting means (20; 20'; 20"; 20'''; 20''''') for connecting adjacent tubular portions (8; 8'; 8" 8'''; 8''''').

8. A stent as set forth in one of the preceding claims characterised in that there are provided more than two tubular portions (8; 8'; 8" 8'''; 8''''') and the first connecting means (20'; 20"; 20'''; 20''''') are arranged in displaced relationship over the length of the stent (1'; 1" 1'''; 1''''') from one portion (8'; 8"; 8'''; 8''''') to another portion (8'; 8"; 8'''; 8''''') in the peripheral direction of the stent (1'; 1"; 1'''; 1'''''), preferably being displaced by at least half a period of the edge contour (36, 37, 38; 36", 37", 38"; 36''', 37''', 38''''').

9. A stent as set forth in one of the preceding claims characterised in that the elements (10''') of at least one portion (8''''') are connected in the peripheral direction of the stent (1''') by way of second connecting means (14.1, 14.2) which are arranged inclinedly with respect to the peripheral direction and which preferably extend in an S-shape, wherein second connecting means (14.1, 14.2) facing in the same peripheral direction of elements (10''') in mutually adjoining relationship in the longitudinal direction of the stent are arranged inclinedly in opposite relationship with respect to the peripheral direction.

10. A dilation catheter comprising a stent (1; 1'; 1"; 1'''; 1''''') as set forth in one of the preceding claims.